November 29, 2016

Shimon Mizrahi
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NVL LABS
INDUSTRIAL HYGIENE SERVICES
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Subject: **CLEARANCE REPORT:**
Visual Inspection to Evaluate Work Performance
POST- Paint Removal at Building 15 South Elevation

Site Address: **Rainier Commons**
3100 Airport Way S
Seattle WA

NVL Project #: **2012-494**

Dear Mr. Mizrahi:

Introduction

NVL Laboratories Inc. (NVL) has prepared this report per the overall Work Plan, the *Visual Inspection Plan to Evaluate Work Performance* (Individual Phase Work Plan (IPWP) II Addendum 3) and the *Example of Method to Randomly Select Two Percent Surface Area to Test* (Exhibit 13 to IPWP1). This report confirms that through the combination of visually examining 100 percent of the surfaces from which the paint was removed and then conducting detailed verification inspection of two percent of the surface area that final clearance approval was achieved for building 15, south elevation.

Executive Summary / Final Visual Clearance Inspection Results

Final visual clearance inspection of the south elevation of building 15 conducted on August 11, 2016, confirmed the physical removal of the paint consistent with the Work Plan and the IPWP II Addendum 3 which met the conditions and requirements for achievement of final clearance approval.

This report confirms that through the combination of visually examining 100 percent of the surfaces that were available to inspect at the time per the existing conditions from which the paint was removed and then conducting detailed verification inspection of two percent of the surface area, that the paint removal on the south elevation of building 15 met Condition 7 of EPA's approval for RBDA, dated December 18, 2013.

Project Background and Visual Inspection Summary

NVL Laboratories prepared the Visual Inspection Plan to Evaluate Work Performance ("Inspection Plan") dated February 7, 2014, to document planned procedures to ensure that paint is removed at the completion of each individual phase of Work as outlined in the Rainier Commons Work Plan dated March 25, 2013, revised July 25, 2013 ("Work" or "Plan"), and meets the requirements of the EPA risk based approval for the Plan.

Initial staging and set up work to remove PCB containing paint from the south exterior of Building 15 commenced on June 28, 2016 by CGI, Inc. (Contractor), pursuant to the EPA approved Individual Phased Work Plan 2 (IPWP2).

As described in the Inspection Plan, the Contractor provided notification to Rainier Commons at the appropriate time during the course of their work that paint removal on specified walls was complete and ready for inspection.

Upon notification, Rainier Commons requested NVL to perform the inspections which included visually examining 100 percent of the surfaces from which paint was removed and then conducting detailed verification analysis of a minimum of 2 percent of the substrate, pursuant to the random selection methodology outlined in Exhibit 13 to the IPWP1.

The general inspection of building 15 was conducted on August 8, 2016. The Contractor was instructed to perform additional work. A second general inspection and detailed 2 percent inspection were conducted on August 11, 2016.

The paint removal Work was conducted pursuant to the IPWP2 between June 28, 2016 and August 9, 2016. The abrasive blasting work in total blasting days equaled 12. Upon completion of blasting a limited amount of detailed hand work was required to complete adequate removal of the paint.

II. Objectives and Methodology

Clearance Requirements

The requirements for visual clearance included:

- Requirement 1: EPA requires complete removal of all visible paint to satisfy the requirements of this approval.*
- Requirement 2: If paint remains after blasting is conducted additional remediation is necessary to meet the terms of this approval.
- Requirement 4: EPA requires the use of a numbered grid and a random number selector for this process.
- Requirement 5: The proposed grid, inspection locations and inspection methodology shall be included in each IPWP for EPA approval.

* NVL concludes that greater than 99 percent of the paint was removed and no visible paint remained per the Work Plan and the EPA approval. The only exception included in the no visible paint standard was the observation of some hairline cracks with a suspect hydraulic sealer that was used in the past on the bricks. Contractor was advised to continue cleaning and if possible, remove as much as possible prior to two percent detailed inspection. It was recognized that removal of these minute areas would have required hundreds of additional man hours with a dental pick or similar style of hand tool, which is impracticable and not warranted on the risk based approval, given the very favorable inspection results.

Visual Clearance

NVL conducted a general inspection of 100 percent of the work area visually sweeping each section of the wall inspected side to side and up and down. Any areas requiring additional work were noted and brought to the Contractor's attention.

A special note regarding a limitation at the time of the inspection is that the paint located under parapet roof flashing still remained. This is due to the fact that the containment was attached to this parapet and access to the paint was not possible per the conditions of the inspection process requiring the containment to be in place. This paint would later be removed when the areas became accessible when the containment was taken down by the Contractor and the parapet roof flashing could be lifted to provide access to the previously inaccessible area.

During the additional detailed 2 percent visual clearance inspections, NVL performed the following tasks:

1) Established separate grid system for the elevations under inspection;

2) Used a random number generator to randomly select grid squares for inspection;

3) Physically marked off the randomly selected grid squares on the building surfaces; and

4) Inspected the grid areas and took photos to document the condition of the building surfaces within the grid squares.

Methodology and Findings of Detailed Inspection August 11, 2016:
South Elevation Building 15

The detailed two percent clearance inspection was performed on by Dave Leonard, Certified Industrial Hygienist (CIH), and Munaf Khan from NVL.

The methodology followed the requirements for overall Work Plan, specifically the *Visual Inspection Plan to Evaluate Work Performance* (Individual Phase Work Plan (IPWP) II Addendum 3) and the *Example of Method to Randomly Select Two Percent Surface Area to Test* (Exhibit 13 to IPWP1).

Random Number Grid Selection for South Elevation and Selection of Two Percent of Area to Inspect:

- To calculate and identify the random two percent of the building surface to conduct a detailed visual inspection, a numbered grid system was established for the surface area of the south elevation of Building 15.

- The south wall dimensions were 30 feet 6 inches, a total surface area of 2,752 square feet, and two percent of this area was calculated to equal 55 square feet. Based on this, and the conditions at the site, it was determined to create a grid matrix of 756 grids measuring 3 feet 7 inches by 1 foot across the surface to represent potential inspection locations, of which a total of 15 grids would equal two percent of the area.

- To select which of the 15 grids to examine, a random number generator process (random.org) was used. Using this process to select the grid location by the assigned grid number, and to be prepared for the actual conditions encountered during the inspection, more than 15 potential grids to examine were identified to be able to reject a location if it did not have a

homogenous substrate surface in which to inspect. With this method, if a grid location was found not to be acceptable, then that selected grid # location would be skipped and the identified random grid location would be used. In the end, only one selected random grid location was found unacceptable.

- In the course of the inspecting the randomly selected grids, only one location in the first 15 randomly selected was found to be unacceptable. The grid location was #524 and was deemed not an acceptable testing location because the surface area partially contained a building component made of metal that was installed to close off a through penetration into the building. As a result, this grid area location was skipped and the next random grid number location was selected for replacement. In the end, the first 16 randomly selected grid numbers generated were used.

- The first sixteen random grid numbers selected are shown in the following table. The random grid numbers selected in the process identified in bullet 2 are placed in numerical order, not in the sequential order of their random selection. The count number (#) in the first column is used to identify that fifteen locations were used to equal two percent of the actual surface area (Building 15 exterior south elevation surface) the inspection represents. Random grid #524 was not assigned a count # since the area was not accepted for inspection.

Count #	**Random Grid #** (placed in numerical order, not sequential order of selection)	**Grid Area Acceptance Status** (at time of inspection)
1	2	Accepted
2	29	"
3	147	"
4	156	"
5	311	"
6	338	"
7	340	"
8	356	"
9	387	"
10	457	"
11	459	"
12	490	"
13	502	"
Not Used	524	N/A
14	673	Accepted
15	702	"

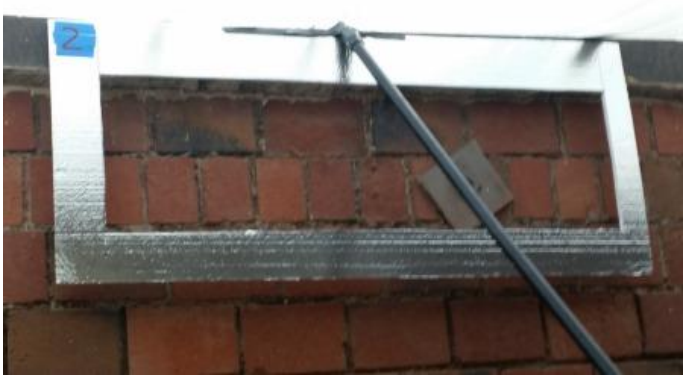
The following diagram represents the numbered grid matrix for the south elevation of Building 15.

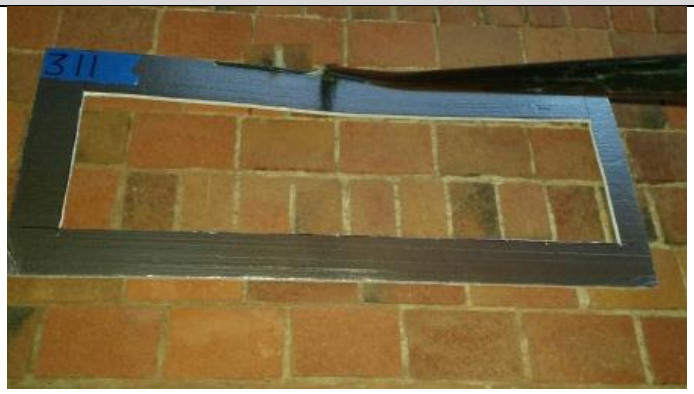
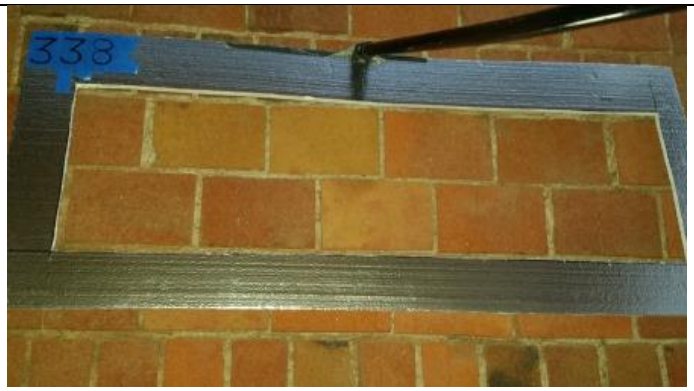
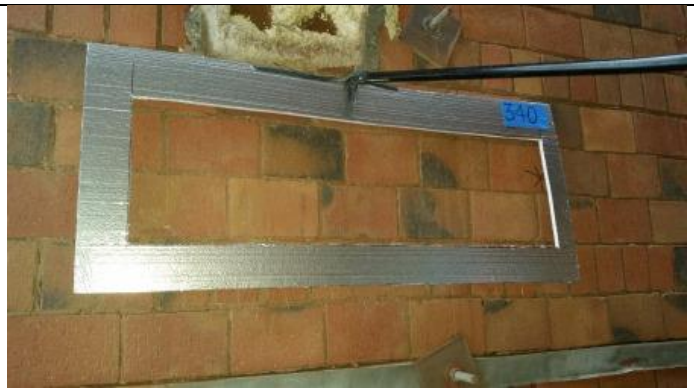
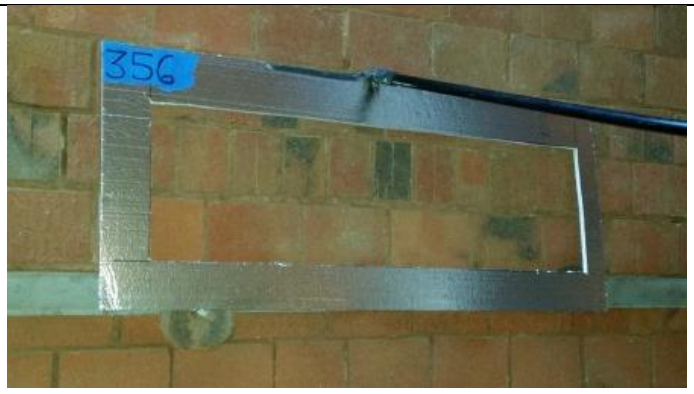
- The general dimensions of the south elevation of Building 15 are 90 feet in width and 30 feet in height.
- Given this, a 26 by 30 grid matrix composed of 756 grids was established.
- Of this grid, each individual grid represents a 3 feet 7 inches by 1 foot area.
- The surface area of 15 grids equals two percent of the total area of the south elevation of Building 15.
- The 16 randomly selected grids used in this assessment are highlighted in yellow. The 15 selected grids for detailed inspection are in green. The one selected grid found not acceptable at the time of inspection and not used (#524) is in red.

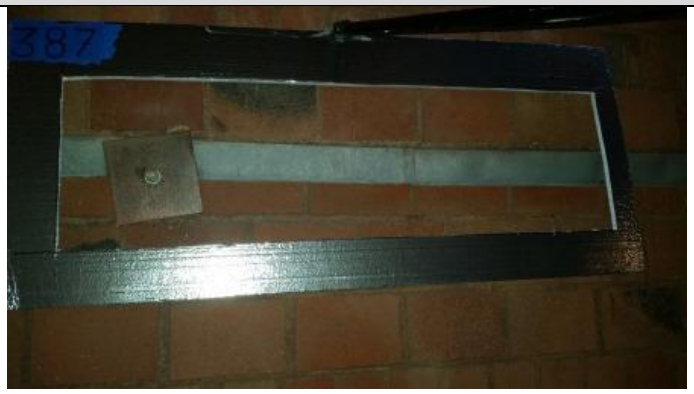
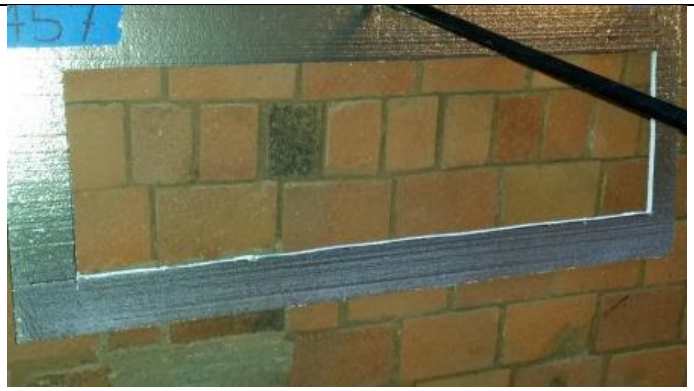
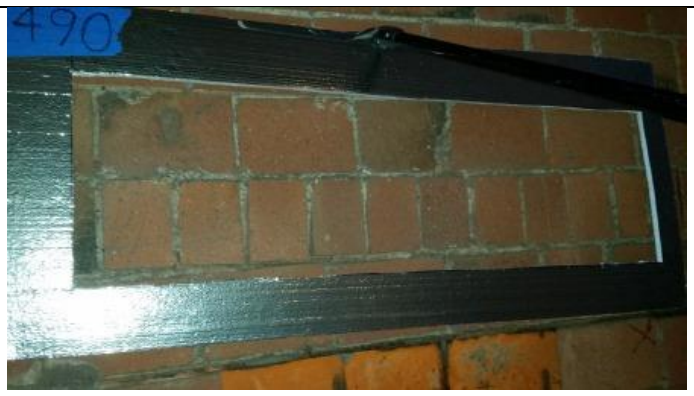
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
27		29																							52
53																									78
79																									104
105																									130
131																147									156
157																									182
183																									208
209																									234
235																									260
261																									286
287																								311	312
313																									338
339																	356								364
365																						387			390
391	340																								416
417																									442
443													457		459										468
469																					490				494
495							502																		530
521			524																						546
547																									572
573																									598
599																									624
625																									650
651																						673			676
677																									702
703																									728
729																									730
731																									756

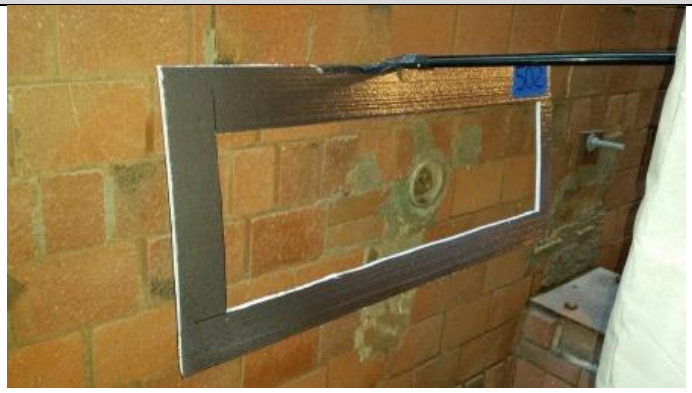
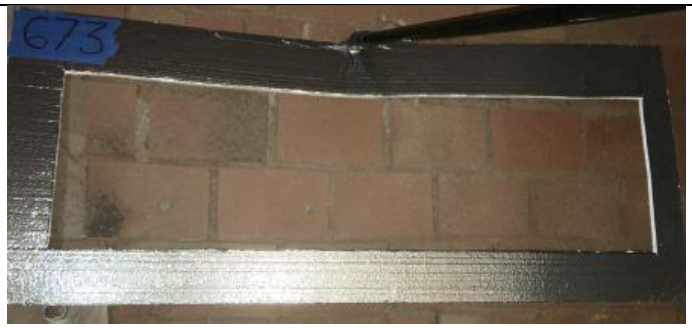
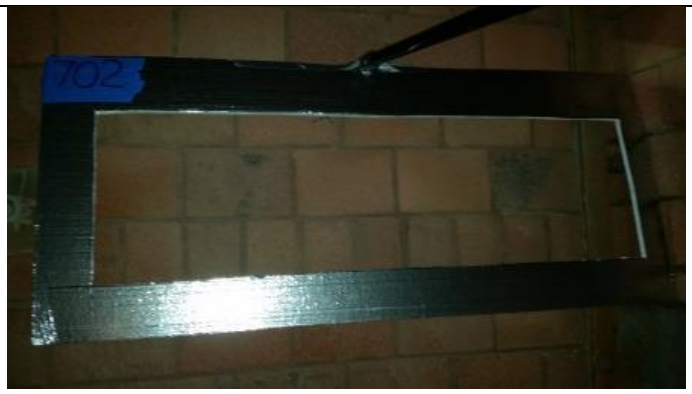
Results of Visual Detailed Inspection of Two Percent of Surface Area

The following photographs document the detailed visual inspection and the determination if paint was still present on surfaces:

Random Count #	Grid #	Photograph	Paint Still Present?
1 085150	2		No
2 085432	29		No
3 090049	147		No
4 090540	156		No

Random Count #	Grid #	Photograph	Paint Still Present?
5 093352	311		No
6 093649	338		No
7 091212	340		No
8 092706	356		No

Random Count #	Grid #	Photograph	Paint Still Present?
9 093106	387		No
10 092129	457		No
11 092348	459		No
12 094127	490		No

Random Count #	Grid #	Photograph	Paint Still Present?
13 091708	502		No
14 095503	673		No
15 095830	702		No

Conclusion

This report confirms that through the combination of visually examining 100 percent of the surfaces that were available to inspect at the time per the existing conditions from which the paint was removed and then conducting detailed verification inspection of two percent of the surface area, that the paint removal on the south elevation of building 15 met Condition 7 of EPA's approval for RBDA, dated December 18, 2013.

Closing

This document is the sole property of NVL Laboratories and Rainier Commons, the building owner.

NVL appreciates the opportunity to provide the testing service to Rainier Commons and trust this report documenting the sample collection and results meets your needs as requested. Please contact NVL if information is needed at any time regarding the information provided in this report.

Sincerely,

Dave Leonard CIH
Certified Industrial Hygienist

REFERENCED:

- *Individual Phased Work Plan 1* (IPWP1)
- *Visual Inspection Plan to Evaluate Work Performance* (Exhibit 12) of the *Individual Phased Work Plan 1* (IPWP1)
- *Example of Method to Randomly Select Two Percent Surface Area to Test (Exhibit 13 IPWP1)*
- *Rainier Commons Work Plan EPA December 18, 2013 Approval of Work*